CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society Of America

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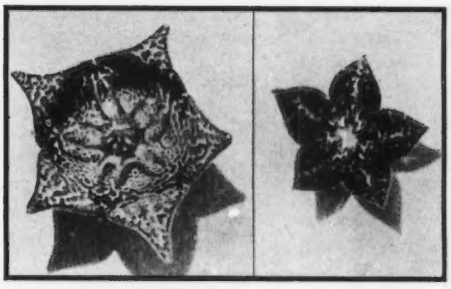

Trichocaulon flowers of the STAPELIEAE, interesting for their jewel-like patterns. Photos courtesy Alain White and Boyd L. Sloane, who have assembled the world's largest collection of plants in this tribe.

CACTUS AND SUCCULENT JOURNAL

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Vol. VII MARCH, 1936 No. 9

PRESIDENT'S MESSAGE

Arrangements for our annual Cactus & Succulent Show are well under way. It will be held at Paul J. Howard's "Flowerland," Third & La Brea Sts., Los Angeles. Dates, May 14-17, inclusive. Mr. Lovell Swisher, Jr., an experienced show man, has been engaged as Manager. Howard Gates, Harry Johnson and Carl Pfadenhauer compose the supporting committee to which each of the affiliated societies, also The Cactus Exchange Club, Long Beach Cactus Club, and Cactus Clubs of America Affiliated, have been requested to appoint a member to serve in a liaison capacity. It is certain that the present plans should result in a very successful show.

Our March meeting will be held with the Long Beach Cactus & Succulent Society on Friday, March 20th, 8 p. m., at the Nine Hole Golf Course Club House, one block East of Park Place, between 6th and 7th Sts., Long Beach. Show your interest in this active group by meeting with them on this date. Mark your calendar now.

April 19th has been selected for an all day meeting with the Riverside Cactus & Succulent Club at the Citrus Experiment Station. It is expected that these joint meetings will extend our acquaintanceships and bind our units more closely together.

An invitation has been received from the California Pacific International Exposition, San Diego, to have a day set aside as Cactus & Succulent Day. The invitation will be accepted and a pilgrimage to the Exposition arranged for a summer date. The cactus and succulent exhibits at the Exposition have been greatly enlarged and improved since last season.

HOWARD E. GATES.

REPRINT IN PAMPHLET FORM

"Collecting Succulents in Mexico," by Eric Walther
16 pages..... 25c

"I heartily agree with the exerpt from Dr. Poindexter's letter, (JOURNAL, Vol. VII, No. 7. pg. 98) pertaining to species individuality," states E. C. Hummel. "I do not believe that any definite boundary exists and I know that external characteristics are remarkably variable according to the ecological conditions prevalent, and can not assume the variation would be as pronounced in floral structure, irregardless of the basis of concept, whether we consider the Foliar theory or Bowers sterilization theory. Identification of species should be based conclusively on flower structure, light refracting qualities not being considered. In other words color can not be used for identification."

NEW LISTS

Albert Krejci, 14427 Kittridge St., Van Nuys, Calif. An interesting listing of succulents that can be obtained with their correct names. Free.

R. Graessner, Perleberg, Germany. 20 page seed list will be sent free.

Fifth Annual Meeting of California Garden Club Federation will be held in Oakland, April 3rd and 4th; headquarters at Hotel Leamington. Session will open at 9:30 a. m. Friday, with reports of Chairmen on State Committees. There will be exhibits from member clubs and very fine bird exhibit in connection with meeting. There will be six lectures on subjects of interest to Garden Club members, illustrated with slides.

Election of Officers for next year will take place at the Saturday morning Business meeting. Meeting will conclude with official dinner held at the Hotel Leamington. Delegates and members will be present at a meeting which has been called to coincide with opening of a Spring Garden Flower Show. Members expect to be present for opening of Spring Garden Show.

FRANK J. MCCOY, *Chairman Publication and Publicity.*

CACTUS AND SUCCULENT SOCIETY OF AMERICA, INC. MEETINGS

Watch this space for regular announcements of meetings. No other notices will be mailed and you should mark your calendar now so that you will be sure to attend all meetings.

The March meeting will be 8 p. m., Friday, March 20th, at the Nine Hole Gold Course Club House, between 6th and 7th Streets, one block east of Park Place, Long Beach. Meet with the active Long Beach affiliated Society.

Toumeya papyracantha Eng.
Photo by Rodden Studio, Copyright pending, by J. D. Whiteman, Roswell, New Mexico.

TOUMEYA PAPYRACANTHA Eng. *REDISCOVERED*

By CLEVE HALLENBECK

About two years ago the Cactus and Succulent Society of New Mexico—then a newly-formed organization—set itself the task of either relocating certain "lost" species of New Mexican cacti, or proving them to be extinct. These four species are *Toumeya papyracantha, Neomammillaria wrightii* and *N. viridiflora,* and *Opuntia arenaria.*

The first fruits of this campaign was the rediscovery of *N. wrightii,* under circumstances that were reported in the CACTUS JOURNAL of July, 1934, and its introduction to cactus growers outside New Mexico.

Systematic search for *Toumeya papyracantha* during 1934 and 1935 proved fruitless, and upon the beginning of cold weather last fall it was decided to abandon the search and concede the species extinct.

Then it happened that Mr. Jack D. Whiteman, the most enthusiastic cactus fan in New Mexico, found himself in Santa Fe the Sunday before Thanksgiving with nothing to do, and he decided to devote the day to hunting, *solus,* for *T. papyracantha.* He knew what to look for, for in 1934 he had made the trip to Washington, D. C., solely for the purpose of inspecting the dried specimen of the species that is carefully preserved under lock at Smithsonian Institution.

His search on this day took him into the low hills east-southeast of Santa Fe, and hardly had he become warmed up before he found his plant —a *T. papyracantha* with twin stems.

News of his find was immediately communicated to the present writer by telegraph, and two auto-loads of cactus fanciers met Whiteman more than a hundred miles from his home in Roswell, New Mexico, each one eager to get a view of the coveted plant and to congratulate its finder (and equally prepared to commit assault and battery upon Jack in the event that he was perpetrating a hoax).

The following day eight Clantastic Fans, led by Mr. Whiteman, gathered in Santa Fe prepared to spend several days combing the district wherein his plant was found. But that night a heavy snow fell! and by the time it had melted

off of southern slopes, three of the party (all men; none of the women deserted) had become discouraged and had gone home.

For two whole days the remaining people raked the draws and flats for two or three miles around the spot, but no more plants were found.

To fully appreciate the value of Mr. Whiteman's discovery, we have but to recollect that only four specimens of *T. papyracantha* ever have been found, (in 1849, in 1873, in 1897 and now in 1935) that no other living specimen of it is known to exist, and the only dead specimen is guarded like the Treasury of the United States; that until Mr. Whiteman's plant was photographed, not a photograph and not even a drawing of this plant was in existence. The Britton and Rose description is based upon a dead, pressed plant, although, since they describe its fruit and flower, some one, some time, must have seen its blossom and fruit.

Were this species procurable, it doubtless would be the most popular of the cacti native to the United States, for it is absolutely unique in addition to being a handsome plant, with a handsome flower, and able to withstand winter temperatures in nearly all inhabited parts of the United States, since it is native to a region having winter temperatures comparable to those of Maine.

The botanical description, based upon this one plant, is as follows:

Toumeya papyracantha, Eng. Plant normally slender-ovate, but sometimes cylindric or even slender-obovate, 6 to 12 cm. high and 3 to 5 cm. thick, having a well-defined taproot. Not ribbed; tubercles close, about 0.5 cm. long and 0.3 cm. thick at lozenge-shaped base, deep green, arranged in 8 or more vertical or spiralled rows; axils naked; areoles terminal, bearing spines and (when young) conspicuous white wool. Radial spines normally 7, whitish, acicular, 0.2 to 0.5 cm. long, the lowermost one longest and flattened, all nearly appressed. Central spines normally 4, pale tawny-gray even when young, flat and papery, acute, 2 to 3 cm. long, two of them about 1.5 mm. wide and two 2 to 3 mm. wide, twisted and even curled, but not noticeably connivent at top of plant. Flower and fruit not known.

Briton and Rose describe the flower as white and the fruit as globose, dry, and thin-walled; but a memorandum in Dr. Rose's handwriting, attached to the Smithsonian specimen, states that the flower is not white, but pink. The Britton and Rose description of the plant is erroneous in that the central spines are not white, but almost exactly the color of the dead gramma-grass in which the plant grows. They are the only really *papery* spines the present writer ever has seen, being no thicker than ordinary writing paper. The radials are hardly stiff enough to be pungent, and the utterly defenseless character of the plant probably accounts for its extreme rarity. To a sheep or goat, it would constitute a delicious mouthful.

Mr. Whiteman has announced his intention of "pickling" his specimen in alcohol, rather than risk losing it by death. So preserved, it will retain its form and color indefinitely. The accompanying illustration is life-size.

EDITOR'S NOTE: We feel that the illustration accompanying this article, and the field work that made it possible, is one of the outstanding contributions to science in the field of cactus during the history of the JOURNAL. An unusual genus, lost to the world, has been found; a plant that has puzzled thousands, is illustrated for the first time—certainly this is worthy of special commendation. We are sincerely appreciative of the interest of members Whiteman and Hallenbeck in sending the following picture and article to the JOURNAL. E. M. B.

EDITORIAL

With the many new books which are being published on cacti, one may well ask whether or not THE CACTACEAE will be regarded with the same past esteem. This is best answered by a statement of Dr. R. W. Poindexter wherein he writes that there is grave danger in the rushing to print of new material and the reckless creation of new species. A too rapid change from an established basic work (such as THE CACTACEAE by Britton and Rose) is certain to cause confusion and act as a hindrance to progress. There is an absolute need for acceptance of a definite listing of plants and allowing it to stand a reasonable period of time before departing to newer classifications which have not stood the test of time.

The Editor will appreciate having members call to his attention articles on cacti and the other succulents appearing in magazines or scientific bulletins. This information will be published in the JOURNAL so that all may obtain copies if desired.

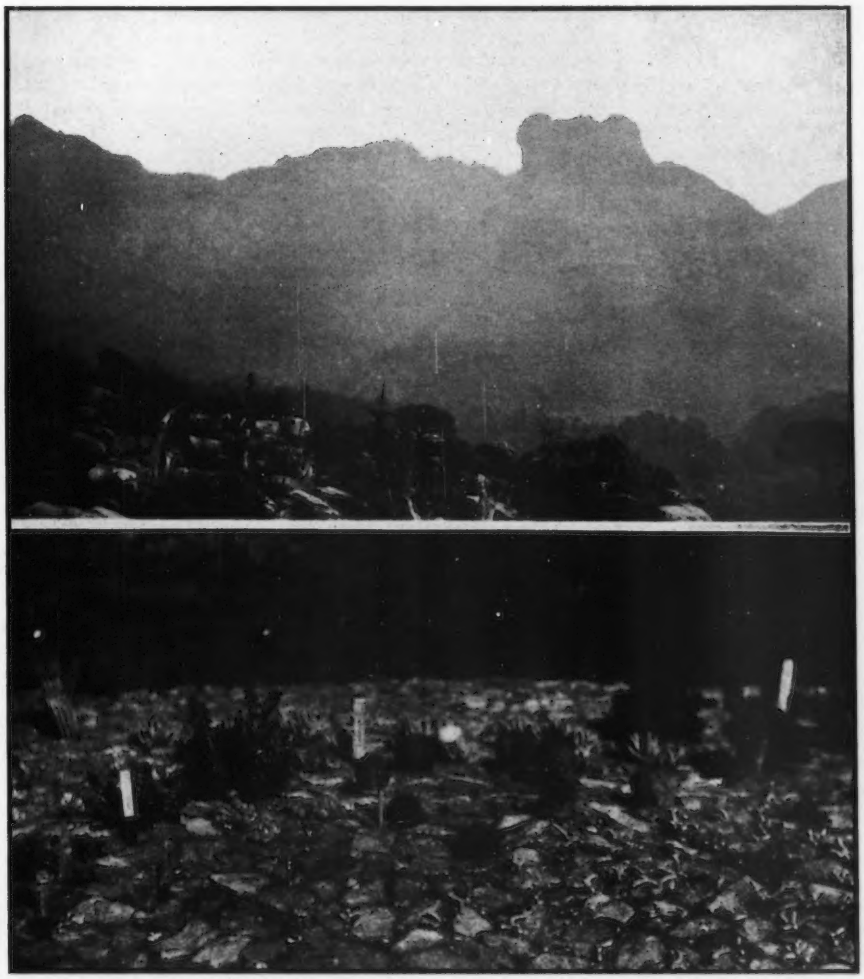
When a cactus man such as Howard O. Bullard from New Jersey becomes interested in Mesembryanthemums as grown by Albert Krejci of Van Nuys, Calif., there is definite proof that succulents eventually win their just popularity. Mr. Krejci can furnish 300 named species of succulents, many of which are now in flower.

Lad Cutak in charge of the succulents of the Missouri Botanical Garden reports the opening of a new succulent house devoted strictly to South African plants of *Liliaceous, Crassulaceous* and *Aizoaceous alliance.* Are succulents on the decline?

SCOTT E. HASELTON.

IMPORTANT NOTICE

The Pronouncing Glossary has been postponed one issue in order to complete the material on hand. Next issue will contain an interesting story of collecting in South America as well as the valued Glossary.—Editor.



ABOVE: A section of the Rock Garden in Kirstenbosch with Castle rock in the background. BELOW: Another section of the garden showing *Euphorbia obesa, E. polygona* and *Anacampseros papyracea.*

SUCCULENTS IN A SOUTH AFRICAN GARDEN

By SARAH V. COOMBS

Five or six miles from Cape Town in the Cape Province of South Africa is the National Botanic Garden, Kirstenbosch. The situation is very beautiful. The garden lies on the slope of Table Mountain, the peaks being more rounded here than on the side which faces Cape Town harbor. Across the valley is another range which often has an almost opalescent glow when a haze softens its outlines. The flowers are spread over the garden's broad acres in a rainbow of color. Here are flowers of hill and meadow, of stream and pond, of sparse woodland and deep forest and here, too, are plants of the desert and semi-desert regions of South Africa.

Rising from a wide carpet of daisies of every color and reaching up to a background of tall tree Aloes and others of the bigger succulent types is a magnificent rock garden of succulents. It rises sharply from level to level, built up with great boulders and rock ledges, steps leading up to

each height. Beyond it, to the right as one faces it, are the lovely silver trees of Cape Peninsula, the tall bushes of the Proteas and the Leucospermums, with their heads of odd bright flowers and the mountain towering above. To the left is a long avenue of Camphor trees, whose smug but agreeable roundness always suggested to one frivolous observer the Plum Pudding Flea of Lear's "Nonsense Book."

The setting of the plants would be an inspiration to anyone planting a garden of this type, so perfectly is each one placed in the situation best suited to it. A tiny Haworthia, whose shining surface indicates its liking for a degree of shade, is set among small rocks which give it that shade for just so many hours each day. In contrast to this, we find *Euphorbia obesa, E. meloformis, E. caput-medusae, E. polygona, Gibbaeum perviride, Anacampseros papyracea* and many others facing the sun with no fear of its rays, for they long ago adapted themselves to their desert conditions and keep their stored up water safely protected in many ways: by shape, by texture, by reducing or eliminating the leaf-surface, by the growth of hairs or waxy material which protect from too rapid evaporation, sometimes by turning their thickened leaves edge-on to the sun.

It is a place of marvels, wonders of shape and color. A bed here seems to have in it only some reddish pebbles. Looking more closely we discover plants among the pebbles, so like the dead rock that we almost have to touch them to be sure they are living growths. Over there is the same condition, only the plants and the pebbles are white. In another place, both are gray. In such places would be found *Pleiospilos roodiae* and *Didymaotis,* reddish in color; *Rimaria heathii, Titanopsis calcarea* or *Argyroderma testiculare,* white; or *Pleiospilos bolusii* and *simulans,* gray. Stranger yet is the fact that some of these plants change their color at times to match the surrounding stones. Collectors bringing in these succulents of the "Stone Plant" and "Windowed Plant" types try to collect also the stones among which they grow. So perfect is the likeness of one to the other, that they are often very difficult to find, even when they are known to be growing in certain spots.

The "Stone Plants" are often like their surrounding pebbles not only in color, but in shape and are so peculiar that one can hardly avoid the whimsical feeling that the Creator meant them for a joke. Life is no joke for them, though. They have, through the ages, as our own succulents have done, faced their hard conditions of heat and drought and evolved a most perfect system of life, suited to their need for living and carrying on for the future generations.

The "Windowed Plants" are even more interesting. Long ages ago they found their ends best served by retiring, root, stem and branch, into the ground, where they live secure, all their light being received through the flattened tops of their leaves, which lie flat on the ground, almost completely hidden. Only when they flower do they reveal themselves, the flower appearing above ground, often so large for the size of the plant that it hides it almost entirely. The flowers are gray, bright and daisy-like.

Among the windowed plants we fine the Lithops, Fenestrarias, a few Conophytums and others. Among the Stone Plants are Gibbaeums, Conophytums, Argyrodermas, Pleiospilos, etc.

Even in Kirstenbosch, where months of dry weather follow the rainy season, some of these succulents must be grown under glass, not for heat, but to protect them from all moisture, so dry is their home in the desert-like Karroo or Namaqualand.

It is impossible in a short space to mention more than a fraction of the plants growing in this wonderful rock-garden. Here are Aloes in many varieties and types; *A. striata,* with leaves banded in white or pale pink; *A. variegata,* marked "like a partridge's wing;" *A. humilis,* a prickly rosette; *A. plicatilis,* one of the most interesting with leaves suggesting a many-rowed candelabrum and handsome spikes of orange-scarlet flowers. Many of the Aloes have fine flowers.

Here are Crassulas and Rocheas and Cotyledons, some with odd forms and many with beautiful, sometimes fragrant, flowers, an interesting group. There are many Gasterias and woolly Kleinias. There are Stapelias with their strange but lovely star-shaped flowers on thick angled stalks. Little *Haworthia viscosa* sends up its sharply-pointed column from the crevice of a rock. A small fat Gibbaeum, spreads itself over its pebbles. A rare lately rediscovered Aloe is *A. polyphylla* from the native state, Basutoland, with sharp-pointed leaves in a perfect corkscrew form. Strangely enough and in contrast to the ways of most plants, the corkscrews turn either right or left.

Some of the queerest-looking plants are members of the Vitaceae, closely related to many well-known vines. They certainly do not suggest vines for they look exactly like the thick stump of a medium sized tree. Only at certain seasons do these bare stumps send forth from their tops rather large, succulent leaves and clusters of small flowers. They are *Cissus juttae* and *seitziana* and are freaks of an extreme kind. There are also many Mesembryanthemums with their bright glittering flowers of many colors.

Here and there among the succulents other

flowers are growing which give an agreeable contrast; *Gladiolus tristis,* with its creamy fragrant flowers and *G. alatus,* in gay orange and yellowish-green; the stiff-leaved, crimson-pink daisy-flowered *Phaenocoma prolifera;* a shrub Erythrina, Zeyheri, with tall spikes of brilliant scarlet; little bulbous Babianas and Sparaxis and hundreds of other plants.

The queer shapes in this garden always made me think of the old fairy-tale of the hillside where the strange rocks turned out to be enchanted people. Only enchantment would account adequately for the astonishing variety of form and one could very easily imagine *Euphorbia obesa,* for instance, turning into a small fat gnome or *Aloe ferox* into a very prickly porcupine.

It is a fascinating place. The good design with the rocks rising sharply from level to level suggests desert cliffs. The plan is better, it seemed to me, for such queer material, than our usually more sloping rock-gardens. I found myself returning again and again to study the plants and watch their growth and to wonder at the many ways Nature adapts these children of hers to the conditions of their desert existence.

Echinocereus longispinus n. sp. Photo by Hugh S. Davis.

NOTES ON OKLAHOMA CACTI

Echinocereus longispinus a new species

By MARION SHERWOOD LAHMAN

Echinocereus longispinus n. sp.

PLANT short-cylindric, solitary, or old plants cespitose or proliferous, 4-13 cm. high.

RIBS 12-16, according to age.

SPINES 14-16, unequal, 8-26 mm. long, upper short, hairlike.

FLOWER 5-9 cm. broad, light magenta, size varying with age.

OVARY and TUBE woolly, with long, hairlike spines. Petals erose, spatulate.

FRUIT green, oblong. Seeds black, tubercled.

TYPE LOCALITY; a slope of Mt. Scott near Medicine Park, Oklahoma.

RANGE; pockets in disintegrating granite on mountain sides and open spaces in the Wichita National Forest Reserve.

Type plants in the Missouri Botanical Garden, the New York Botanical Garden and the National Museum.

This new species belongs in the Echinocereus

group which is distinguished by the wool and long weak hairs on the ovary and flower tube. The plants begin to bloom when not more than an inch and a half high. Flowers on young plants smaller than on old. It is plentiful in granite-strewn areas in the Wichita Forest Reserve and probably farther south. Blooms in late May and in June. The flowers are faintly fragrant. They are visited by Hopla beetles and small bees.

The color of the spines varies on different individuals; on some, pure white; on others, delicate mauve, on others bright brown. When colored, the spines are inclined to be shaded, light at the base, with darker tips. It is one of the most beautiful of our cacti, both plant and flower.

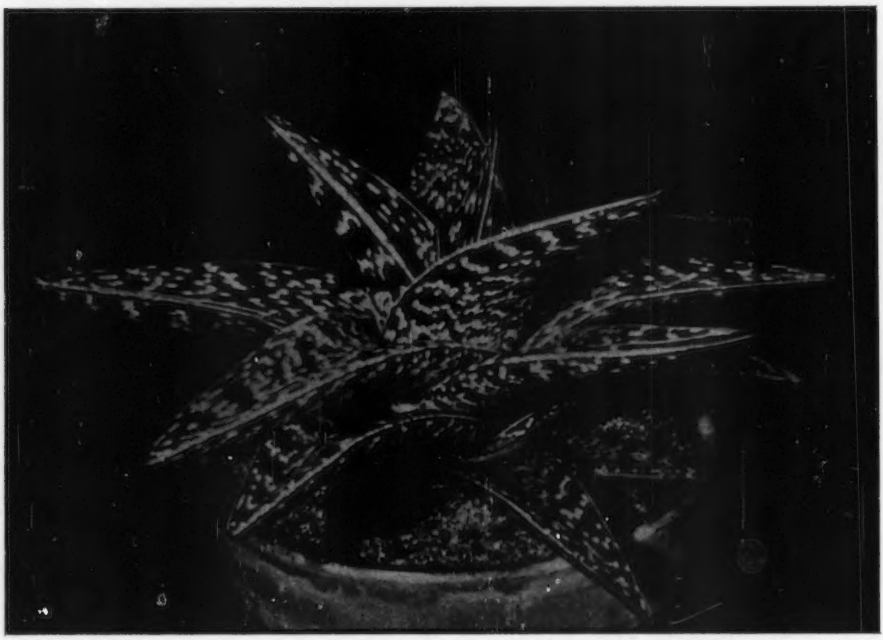


Photo by John Poindexter. Approx. x.25.

NEW GARDEN SPECIES VII

Gastrolea sculptilis—Hort. A. C. S. No. 6-184-212

ORIGINATOR: R. W. Poindexter, 1933.
SEED PARENT: *Aloe variegata.*
POLLEN PARENT: *Gasteria cheilophylla.*

Plant acaulescent or shortly caulescent in age; making offsets sparingly: leaves ca. 18 cm. long; 85 mm. wide at base; thick, heavy, very rigid; broadly channeled above, the channel having a flat base; keeled below, particularly toward tip, the keel being decidedly displaced from center line; edges and keels white-margined and irregularly roughened or denticulate; color of leaves olive green; markings nearly white: inflorescence branched; ca. 50 cm. high: flowers 3 cm. long; pale red with yellowish tips; sterile. The name refers to the rigid and sculptured appearance of the plant.

It took first prize in the 1935 National Show in the class for new originations, open division, and has ample individuality to make it of value in general collections. It has the added advantage of being more vigorous and easier to grow than *Aloe variegata,* resembling its pollen parent in this respect.

EDITOR'S NOTE: All members who have originated new plants of horticultural value are urged to send them in for description in this department. Hybridization is a fascinating hobby, and interesting results should be permanently recorded for the benefit of others. Address Dr. R. W. Poindexter, 4160 Country Club Drive, Long Beach, Calif.

The following 8 pages are the 14th installment of Vol. II THE CACTACEAE.

COLLECTING SUCCULENTS IN MEXICO, 1935

By ERIC WALTHER

Part 1.

Last season's trip to Old Mexico, described in these columns at length, was really thought to be the only one we would probably ever make. But the returns, both in wealth of personal experience, and unexpectedly large amount of valuable information gained, led us to hope that we might return sometime. The final impulse towards another trip was the realization that several remaining knotty problems in the taxonomy of the genus *Echeveria* could not be solved except by further field-studies at various type-localities, and collection of a wider range of material. Mexico City was again made our base, the wealth of Mexico's Flora being so great that years would be required to even begin to exhaust all the possibilities of any one locality.

The trip from Los Angeles to Mexico City was uneventful, being covered by air between 4 a. m. and 6 p. m., and furnished a unique opportunity to study, close at hand and from an unequalled vantage-point, the topographic peculiarities of the region traversed. It was most fascinating to watch the formation of the clouds, arising from the moist tropical lowlands and condensing on the flanks of mountain-ranges into visible forms. The resultant climatic regions are clearly expressed in zones of distinct vegetation, *Echeveria* in particular usually being confined to the steeper portions of the hills at the level of the clouds.

At Mexico City's airport we were met by Herrn Halbinger, who insisted that we should be his guest for the time of our stay, so that we were able to sit down to a real family dinner, in company of charming Frau H. and three promising boys. We can not speak too highly of the hospitality shown us, and especially of the valuable guidance furnished by our host, based on his wide experience in collecting cacti and orchids. Of his own collection at his home at Villa Obregon we show a general view as well as one interesting item, i.e. *Echeveria cuspidata.*

The first trip with out host was to Mt. Atzacoalco near Guadalupe, whence Hemsley's *Cotyledon parviflora* had come. This was subsequently designated by Dr. Rose as the type of his genus *Villadia,* the last rather insufficiently distinct from *Altamiranoa.* As the type-specimen is imperfect, lacking all basal leaves, its correct understanding would be furthered by living plants. However, several hours diligent search failed to reveal anything more than *Altamiranoa mexicana* and *Sedastrum ebracteatum* on the badly overgrazed hill. Could one of these be Hemsley's plant? We hope to consult the type-specimen or at least a photo sometime soon. Until then any opinion must be mere surmise; for instance if the inflorescence should turn out to be lateral, the plant would be difficult to distinguish from *Thompsonella.* Incidentally we investigated the next picturesque crag, known as "Cerro Risco," discovering in its steep clefts a perfect natural rockgarden, featuring *Sedum dendroideum, Sedastrum ebracteatum, Echinocereus cinerascens, Neomammillaria rhodantha* var. *pfeifferi, Neom. centricirrha, Echinocactus corniger,* these cacti all represented by unusually fine clumps, as well as *Opuntia imbricata* and *pubescens,* various Agaves and Bromeliads, etc., but no sign of either *Villadia* or *Thompsonella.*

Our next trip took us first to Cuernavaca, the weekend home of many residents of Mexico City, stopping along the road at Cima, where last season we had gathered plants of our new *Echeveria crassicaulis.* Our photo No. 6 shows Herrn Halbinger posed in front of an old specimen of *Juniperus mexicana,* a characteristic component of this typically cool-climate flora, common here at elevations of 9,000 feet.

At Cuernavaca we renewed our acquaintances made last season, with Srs. Oestlund and Nagel, as well as with *Echeveria crenulata,* common on walls, steep banks, lava-flows, etc. Next day we left early, aiming for the "Canon de la Mano" near Iguala in Guerrero, the type-locality of *Thompsonella platyphylla* Rose, driving over fairly good roads, undergoing further improvement, through at first fairly level country at low elevations, and consequently distinct vegetation, including the picturesque-habited *Crescentia,* or Calabash-tree. This part of Morelos must have been a lake at one time, which finally cut itself an outlet through this very Canyon we were headed for. The narrow cleft is also utilized by the railroad, but we left our car at El Naranja and hiked the remainder of the distance over the railroadties, in rather oppressive heat at this low elevation. Our *Thompsonella* was discovered even before we entered the Canon proper, in the hot and dry rocks of the sunny side, where it grows with a *Sedastrum.* Continuing over a rather impressive steel bridge over the stream to the shady side of the Canon, we soon found another *Echeveria,* of familiar facies, yet uncertain identity. Numerous seedlings testified to its truly

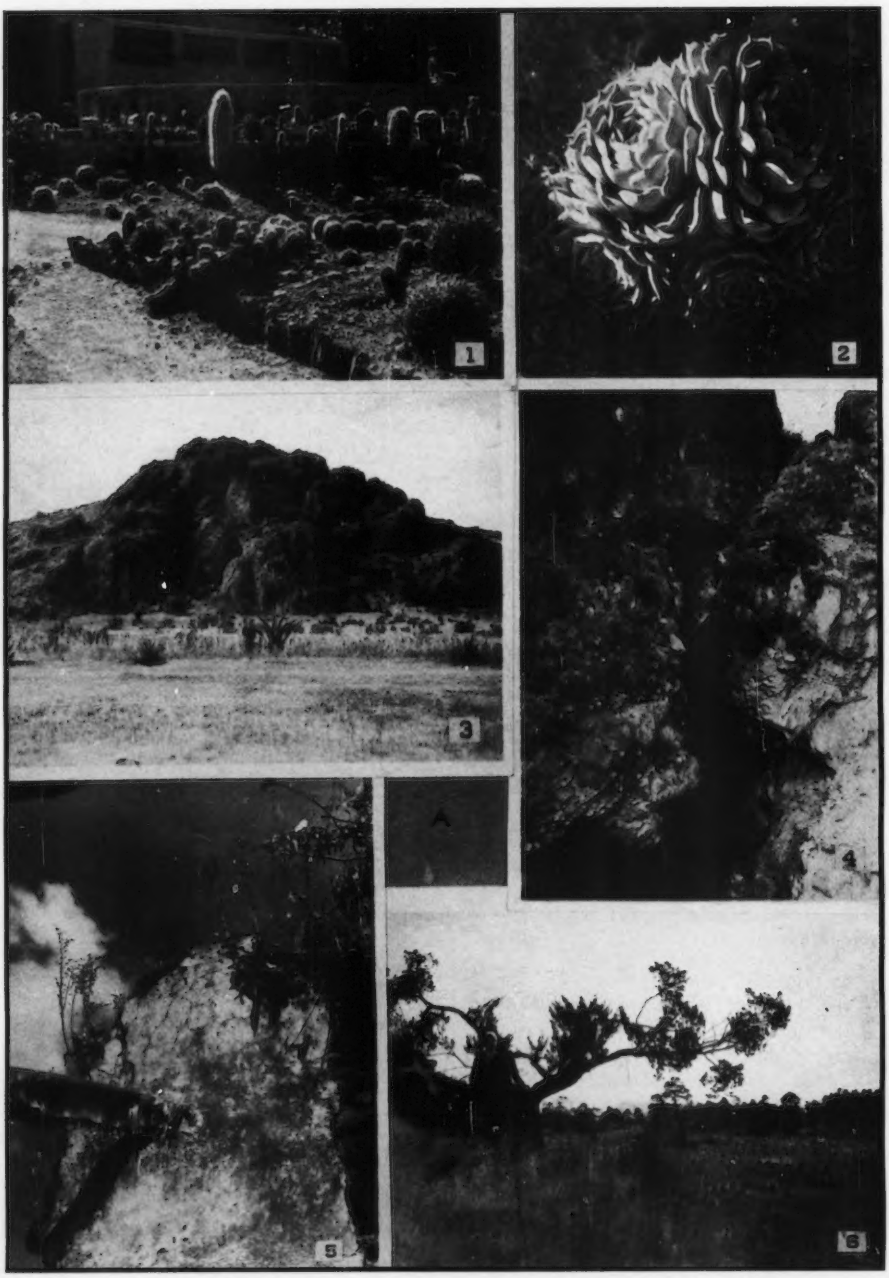


PLATE A. FIG. 1. Cactus-collection of C. Halbinger, Mexico City. 2. *Echeveria cuspidata.* 3. Cerro Risco near Guadalupe. 4. Close-up of natural rockgarden. 5. *Echeveria crenulata* on walls at Cuernavaca. 6. C. Halbinger with *Juniperus mexicana.*

being indigenous here, while the still very young inflorescence in evidence pointed to its affinity with *Echeveria fulgens* Lemaire. To find this kind of an *Echeveria* so far west, at this low altitude was most interesting, as were also the associated plants, including bamboos, climbing aroids, begonias, ferns, lianes, *Achimenes, Caesalpinia pulcherrima,* etc. Continuing to Iguala for lunch, we had a piece of luck, both good and bad, developing a flat tire just as we arrived. On the way back we made a short stop at Taxco, trying to find *E. goldmani,* supposed to grow there on roofs, etc., but found nothing, so on home, largely after dark, with the added and unusual hazard of roads used habitually by the local cattle for their nocturnal ruminations.

(To be continued)

Cactus Collecting in Manana Land

By YALE DAWSON

Continued from February CACTUS AND SUCCULENT JOURNAL

On the 29th parallel near Punta Prieta we first encountered *Lemaireocereus thurberii,* and from then on we followed it as a common feature of the landscape, occasionally stopping to admire or collect a crest. However, between Mulegé and Comondú it assumed a different aspect, for there it grew in dense masses as do the Cephalocerei in the tropical jungles of South America. The plants were huge, 20 to 30 feet high, with dozens of tall slender spires rising high above all other growths.

During the summer months in Lower California, *Lemaireocereus thurberii,* known colloquially as "pitahia dulce," is one of nature's greatest blessings to the desert people, for it offers them, for the picking, their main item of diet during the hot months. At each home or ranch where we stopped for water or directions, we were offered fresh picked pitahias both red and white, for *L. thurberii* produces fruits of different color and taste although not on the same plant. We found these fruits to our liking, and for several days we made our lunches by stopping in cactus groves and picking our fill of the fruit of our choice, red or white.

On the hot, volcanic flats near Comondú we encountered the gleaming-spined *Opuntia ciribe* which is the twin brother of *Opuntia bigelovii.* As we were collecting specimens of this plant we saw coming down the road several burros, each with two large pieces of *Pachycereus pringlei* fastened on their pack bags. Each piece had had the spines carefully trimmed off so that it looked similar to a "rattlesnake" watermelon. We learned that very frequently these fleshy bodies are brought in for livestock food, since there is practically no other available feed during dry years. If the rancher finds it too difficult to secure this type of feed in dry times, he must resort to turning his cattle out to choose between starvation and a painful and sometimes short existance with the "cholla" as food!

Comondú is the most out-of-the-way "big" town in Baja California and is almost entirely self-supported, for on the South and West is the great Magdalena Plains barrier and on the East are the barren volcanic slopes of the Sierra de la Giganta. Comondú, like San Ignacio, is an oasis of the desert, for it is entirely hidden until one suddenly comes to the end of a hot desert plateau and finds himself almost directly above a deep winding canyon where the thatched roofs of adobe huts can be seen amid thousands of luxuriant date palms.

We went down and down over hairpin curves and along precipitous cliffs for nearly two thousand feet, then finally leveling off into the tropical valley. As we went twisting down the canyon towards the sea, the road became more and more narrow, and soon it became necessary to move boulders and chop down trees to permit our oversized truck to pass. As we went on, the canyon bottom became drier and more barren until in a short time we passed over a small hill and saw the glaring sands of the desolate Magdalena Plains, the home of the "Creeping Devil."

Not so many thousands of years ago, this vast area was covered with sea water and through the ages before, the sea had kept piling up great deposits of sand and silt. As the waters receded this silt-covered plain dried, the soil loosened, and the members of our little party were soon to get the full effects of the silt deposit.

The instant we entered the Plains we were at a loss as to the direction or road to follow, for there were literally dozens of separate tracks going in every direction. We shifted to second, although on level ground, and followed a set of tracks that looked comparatively good. We soon shifted into low gear and then to compound as we roared in a cloud of dust through the bottomless area of flour-like silt. Before long we mired down and came to a halt as the straining motor gave a final cough and stopped. We got out the

shovels and gunny sacks, got the truck up out of the ruts, and started out on foot to explore the country for a more promising route. Growing here and there in the dry silt were little clumps of dry grass and scrubby sage brush. We endeavored to make quick pulls through the silt, stopping on the brushy places where the wheels could get traction. After several hours of this grind-and-stop plan we surprisingly found ourselves among a few little huts, which, the map told us, was Pozo Grande. We were told there that the road was better from there on, and we soon found it possible to speed along in low gear!

Early the next morning we were enthusiastically heading for one of the biggest prizes of the expedition, *Machaerocereus eruca,* the Creeping Devil. We first encountered a few scattered, circular colonies of these crawling plants and before long we entered into Mainstreet Devil-town where it was difficult to walk without treading on living or dead plants. The *erucas* were growing there in company with *Wilcoxia striata* and *Opuntia invicta* which are quite common throughout the length of the plain.

While walking about, collecting among the colonies of crawling things, we noticed the different lengths of the plants. In hot, sunny locations most of them were not more than three feet long; in fact, some showed a dead trail of spines eight feet long, or more, while the living and growing part was no more than a six inch tip. Under the scrubby trees and bushes, where a scant supply of leaf mould had accumulated, the plants were less shriveled and usually much longer. The longest one we found was about ten feet in length. After attaining a large size, the rear end softens, rots, and dries back as the tip continues to grow.

Nearing the end of the Magdalena Plains, in a low sandy gully within sound of the booming, Pacific surf, we first encountered the plants that had given Mr. Gates such a thrill when he first set eyes upon it a couple of years ago, *Lophocereus gatesii.* We enthusiastically set about collecting specimens from the few decent looking plants that we could find. Due to the fogginess of the region, a heavy crop of lichen is permitted to grow and is found covering to some extent everything in sight. We had to take care also to collect specimens free from the little boring insects that tunnels up through the cores of the stems. After having seen all forms of the genus *Lophocereus,* we concluded that *L. gatesii* was the most distinctly different of the group, although even it seems to interbreed with *L. australis* to some extent over a small area between Arroyo Seco and La Paz. Without a doubt *L. sargentianus* and *L. australis* are geographical races of *L. schottii* and should be classed as varieties as they were in THE CACTACEAE. *L. gatesii* is so much more distinct than the other forms that it should probably remain as a species, at least until it is more carefully studied and its distribution better known. It is not at all unlikely that other weird forms of Lophocerei may be found in the little explored parts of the peninsula like *L. schottii monstrosus* and the new "stretched" form known in Europe as *Cereus michelianus.*

As we finally were crossing the narrowest section of the peninsula, no more than forty miles across, we began to watch for a first glimpse of La Paz, the southern capitol of the desert state. There we could rest in peace and comfort while we prepared for the trip around the Cape. We knew that we needed repairs on the truck badly for something was radically wrong with one of the front wheels. When the wheel was taken off at the Ford garage in La Paz, the spindle bolt was found broken, but as the pieces had not fallen out, the wobbling wheel had not detached itself from the truck. Since no such part could be found in town, not even in the Rufo Bros. store where most anything from toothpicks to steamships can be bought, we had a new one made from an old Ford axel. During the several days delay, we were staying at the rooming house of "old mother Myers" where a seven course meal can be had for "two bits" and lodgings at the same low rates. The meals were certainly a pleasure after eating out of cans for a couple of weeks, even though we did have to bring our own butter! La Paz butter, rancid as it is, costs no less than $4.50 a pound and cannot be furnished with a meal without extra charge.

After a week of collecting around the loop of the Cape we were back in La Paz with a great many different species added to our collection. It was back at La Paz, however, that we accidentally secured one of the best plants of the entire trip.

Mr. Gates had given us a letter of introduction to old John Leksel, the shark-fisherman of La Paz. Just before leaving town to return north, we stopped at his one-room shack for a visit as well as to secure specimens of *Neomammillaria bullardiana,* which we knew to grow near his house. As we went out past his well, I noticed a peculiar looking Ferocactus stuck in the ground by a crude fence. It turned out to be a fine specimen of the rare *Ferocactus diguettii* which Leksel had gotten on one of his sharkfishing trips to its native home, Cerralbo Island. Of course we lost no time in making a bargain with him, and soon we had our prize packed in with the rest of

our load and were on our lonely way back through the desert.

We collected cacti, packed cacti, sweltered in the heat, dug ourselves out of sand holes, plowed through the "flour road" at Pozo Grand, and carefully eased our heavy load over the sharp volcanic rocks of Comondú Viejo, finally coming out of the "frying pan" mountains onto the beautiful Concepción Bay where we immediately called time out for a swim. However, in that humid atmosphere, the temperature of 120 degrees soon caused the sweat to pour out again and not until we left the Gulf seacoast did we get the least bit of relief.

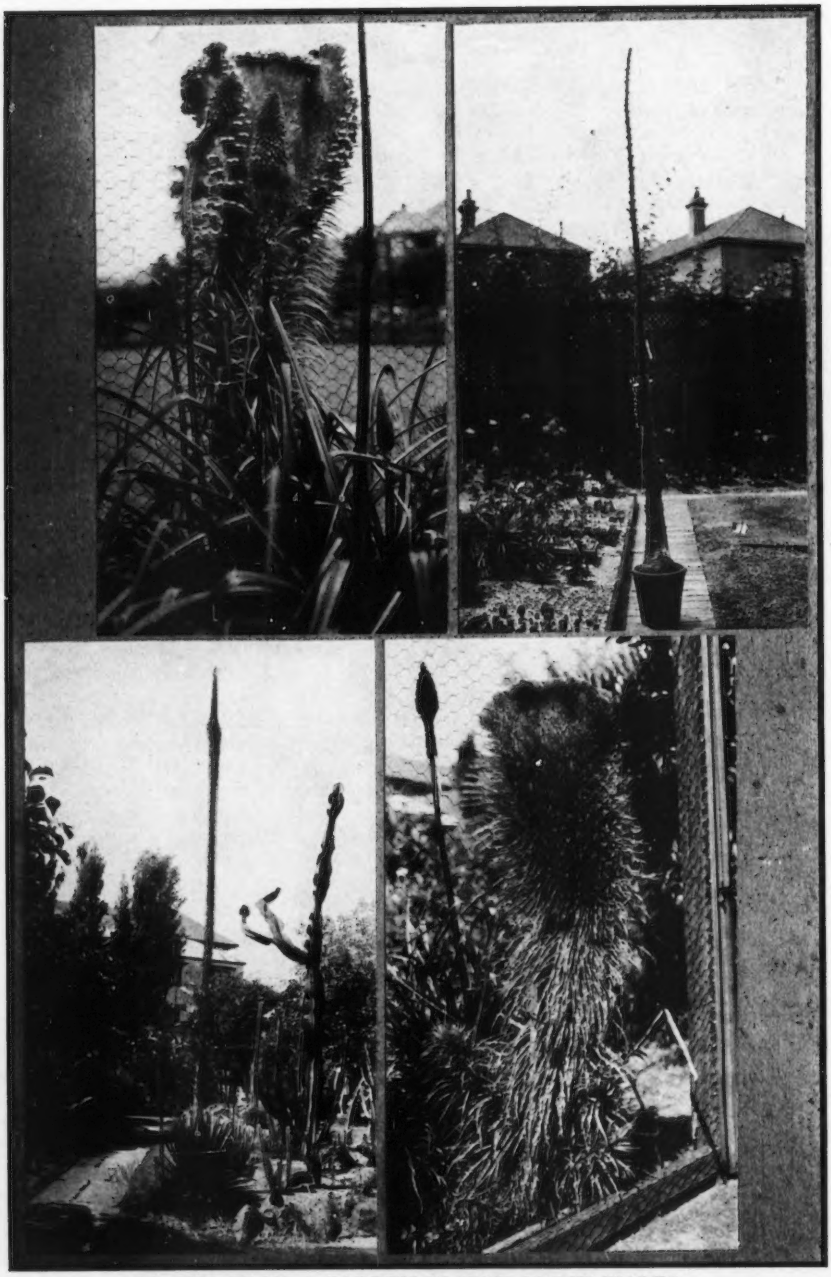
For days we had suffered in the heat and had expressed our hopes that a little cloudy weather would come to shut out the sun. Our wishes were bountifully granted as we left San Ignacio, five hundred miles from the border. It rained, it drizzled, and it poured. From then on our anguish was not heat, but mud. Mud was everywhere, in our shoes, in our eyes, in our hair, and covering the truck with a thick, brown layer. For every one of those five hundred miles we fought mud. We were down to the hubs dozens of times and during the first couple of days we had to fight mud while it was still raining! We spent an entire day building roads through the "tomato soup" road across the San Jorge grade. That night at dark we were just entering Rosario, and as we had no place to sleep we decided to drive on through the sloughs of mud and lakes of water. We had experienced a very hectic time while trying to sleep through the rain the night before. I had slept on the cab floor between the gear shift and brake with the clutch and brake pedals for pillows. Eller had stuck it out on an uneven series of boxes and boards while Dad took a position on top of an *Idria columnaris* and *Pachycereus pringlei!*

There was a sixty mile stretch of mud and water ahead of us between Rosario and Hamilton's ranch, all under a blanket of darkness. We left Rosario at 7 p. m. and arrived at Hamilton's ranch at dawn. Imagine our surprise when we came up over the hill by the gate and saw Mr. Gates running across the fields from the house in his night shirt, frantically waving his arms for us to stop! We rumbled through the big iron gate and down under the pepper trees, where we found the other fellows rubbing and blinking their eyes. It was, indeed, a joyful reunion.

Our trip was uneventful from there to Carr's ranch except that Mr. Gates' overloaded and topheavy truck nearly tipped over on a sideling road near San Vicente.

We had had a double thickness of canvas stretched over the whole of our load from the cab back, but in spite of this, the rain had poured on through. Consequently our load of plants, all carefully packed in newspapers, gunny sacks, and cardboard boxes was in an unbelievable mess. Due to the wet newspapers wrapped around all the small plants and packed in cardboard boxes, we lost no less than two hundred specimens through rot. We had luckily collected an over supply of each species in case of some such disaster, and, therefore, our loss was not as great as it might have been. It was necessary to unpack and inspect each plant separately for dirt and insects, to list them, and then repack them, before they could be taken across the border. It took us more than three days to complete this work, which we knew had to be entirely repeated at San Ysidro, the U. S. inspection station.

As to the Mexican permit; it had not yet arrived when we unpacked our plants at Carr's ranch, and as there were only four days left to get the plants out of the country, we had horrible visions of our trucks being taken out to Tijuana dump and our plants thrown in. However, the day before we left for Tijuana, that was two days before the permit was due to expire, it arrived in the mail at Long Beach. My mother immediately set out for Mexico and met us just in "the nick of time" like in an old time movie thriller. With this load off our minds we drove into Tijuana, got a release on our plants from Mexico, and after four days of inspection on the U. S. side of the border, we drove down the wide, paved road towards home!



PLANTS FROM A GARDEN IN NEW SOUTH WALES

UPPER LEFT and LOWER RIGHT: Front and back views, respectively, of a malformed plant of *Echium wildpertii*. A Tritoma showing in the first picture should not be confused with the plant discussed. LOWER LEFT: *Yucca filamentosa* with a flower spike 16 feet high that grew in two weeks time. Note the smaller spikes on the suckers of the main plant. Euphorbia collectors will be interested in the background, to the right, of those plants. UPPER RIGHT: A 9 foot plant of *Pachypodium giganteum* in the same garden. These pictures are from Herbert J. Solomon, Sydney.

BOOK REVIEWS

KAKTUS—ABC by Curt Backeberg and F. M. Knuth. 432 pages 6x9, illustrated. Gyldendale, Copenhagen, Publishers. This excellent book represents years of study and field work and is the most comprehensive work on cacti since the Britton and Rose monograph THE CACTACEAE. Although the book is printed in Danish,* a student can gain much information from its pages and no cactus library will be complete without it. The authors are both members of the Cactus and Succulent Society of America and have introduced many new species during the last few years.

KAKTUS ABC contains descriptions of 1050 species which are divided into 153 genera; 103 species—all South American—are being described for the first time. It has been the authors' plan to make a complete "enumeratio" of all cactus species known to science; about 1,700 species are recognized, or 500 more than Britton & Rose. Of course, most of these are recent discoveries, described after 1922-23, but some are older. The book follows the improved Backeberg System, which is the same system as in Backeberg's BULLETIN OF CACTUS RESEARCH, with minor alterations. These are: Peireskia is divided into 2 genera, P. and Rhodocactus. Opuntia is divided into these genera: Opuntia, Tephrocactus, Cylindropuntia, Corynopuntia (the series Clavateae Eng.), Consolea and Brasilopuntia. Rhipsalis: the genus Lepismium is restored, and the species of the subgenus Loefgrenia Bckbg. are transferred to this genus. The "Phyllocactus" genera are treated in the same way as in Br. & R. All other genera have been thoroughly revised and many species transferred from one genus to another.

THE JOURNAL will take orders for this book and the first shipment will arrive soon. Orders will be filled as promptly as possible. The price will be determined as soon as the duty is determined. Mail a check for $5 and any reduction will be returned.

* The student will note the value of having plant names the same in all languages, thus this new book even though written in Danish can be used for its listings and classifications.

LAS CACTACEAS DE MEXICO by Helia Bravo H. Now on the press. A book of approximately 600 pages, containing more than 300 original photographs of cacti in their natural habitat. This long waited for work of member Helia Bravo H. on the most typical plants of Mexico is destined to furnish valued information to the cactus world. A review will follow in a future issue of the JOURNAL, but you may reserve a copy by writing now. You will be notified as to the price before shipping.

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